

Name _____ Period _____

College Prep Chemistry of the Earth

Assignment 3C – Basic Covalent Bonding + Dot Structure Review

30 Points

Answer the following questions

What is a single covalent bond?	What is a diatomic element?

Complete the dot and structural formula for the following diatomic elements.

- ① Find # val. e⁻
- ② Draw dot Struc. w/ Unpaired facing other atom

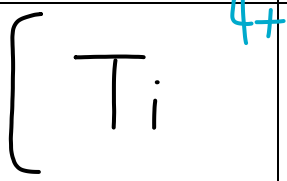
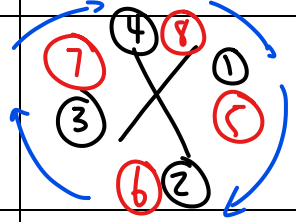
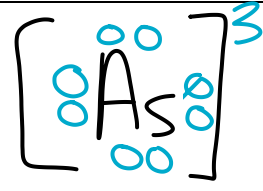
Diatomic Fluorine (F ₂)	Diatomic Fluorine (Cl ₂)
Diatomic Element Dot Structure	Diatomic Element Dot Structure
	Cl Cl
Diatomic Element Structural Formula	Diatomic Element Structural Formula
	Cl Cl

Complete the dot and structural formula for the following simple molecules elements.

- H
- only 1 dot (1 val e⁻)

Water (H ₂ O)	NH ₃ (Ammonia)
Diatomic Element Dot Structure	Diatomic Element Dot Structure
Diatomic Element Structural Formula	Diatomic Element Structural Formula

Complete the following chart for lewis dot structures for both neutral and ion structures

Neutral Atom	Lewis Dot Structure	Valence Electrons	Ion	Lewis Dot Structure	Valence Electrons
Ti (<u>4</u> val e ⁻)		4 (4 val. e ⁻)	Ion = [] Ti ⁴⁺ no dots		
Ba			Ba ²⁺		
V (3 val e ⁻)			V ³⁺		
(group 15) As 5 val. e ⁻		5 5 val. e ⁻	- Ion [] As ³⁻ 8 e ⁻		8 (gain 3e ⁻)
At			At ¹⁻		
Ne					